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TECH CENTER 1600/2900 #17  
4-27-01  
P.2RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/484,629ADATE: 04/17/2001  
TIME: 20:04:31Input Set : A:\robinson.txt  
Output Set: N:\CRF3\04172001\I484629A.raw

ENTERED

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3 <110> APPLICANT: Medical Research Council
5 <120> TITLE OF INVENTION: Obesity Gene
7 <130> FILE REFERENCE: 18396/1140
9 <140> CURRENT APPLICATION NUMBER: 09/484,629A
10 <141> CURRENT FILING DATE: 2000-01-18
12 <150> PRIOR APPLICATION NUMBER: GB 9910522.3
13 <151> PRIOR FILING DATE: 1999-05-06
15 <160> NUMBER OF SEQ ID NOS: 46
17 <170> SOFTWARE: PatentIn version 3.0
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 924
21 <212> TYPE: DNA
22 <213> ORGANISM: Rattus sp.
24 <220> FEATURE:
25 <221> NAME/KEY: CDS
26 <222> LOCATION: (5)..(607)
28 <400> SEQUENCE: 1
29 tgctc atg ttg cgg gct ttg aac cgc ctg gcc gcg cgg ccc ggg ggc cag 49
30 Met Leu Arg Ala Leu Asn Arg Leu Ala Ala Arg Pro Gly Gly Gln 15
31 1 5 10 15
33 ccc cca acc ctg ctc ctt ctg ccc gtg cgc gcc cgc aag acc cgc cac 97
34 Pro Pro Thr Leu Leu Leu Leu Pro Val Arg Gly Arg Lys Thr Arg His 30
35 20 25 30
37 gat ccg cct gcc aag tcc aag gtc ggg cgc gtg aaa atg cct cct gca 145
38 Asp Pro Pro Ala Lys Ser Lys Val Gly Arg Val Lys Met Pro Pro Ala 45
39 35 40 45
41 gtg gac cct gcg gaa ttg ttc gtg ttg acc gag cgc tac cga cag tac 193
42 Val Asp Pro Ala Glu Leu Phe Val Leu Thr Glu Arg Tyr Arg Gln Tyr 60
43 50 55 60
45 cgg gag acg gtg cgc gct ctc agg cga gag ttc aca ttg gag gtg cga 241
46 Arg Glu Thr Val Arg Ala Leu Arg Arg Glu Phe Thr Leu Glu Val Arg 75
47 65 70 75
49 ggg aaa ttg cac gag gcc cga gcc ggg gtt ctg gct gag cgc aag gcg 289
50 Gly Lys Leu His Glu Ala Arg Ala Gly Val Leu Ala Glu Arg Lys Ala 95
51 80 85 90 95
53 caa gag gcc atc aga gag cac cag gag ctg atg gcc tgg aac cgg gag 337
54 Gln Glu Ala Ile Arg Glu His Gln Glu Leu Met Ala Trp Asn Arg Glu 110
55 100 105 110
57 gag aac cgg aga ctg cag gaa cta cgg ata gct agg ttg cag ctc gaa 385
58 Glu Asn Arg Arg Leu Gln Glu Leu Arg Ile Ala Arg Leu Gln Leu Glu 125
59 115 120 125
61 gca cag gcc cag gag ctg cgg cag gct gag gtc cag gcc cag agg gcc 433
62 Ala Gln Ala Gln Glu Leu Arg Gln Ala Glu Val Gln Ala Gln Arg Ala 140
63 130 135 140
65 cag gag gag cag gct tgg gtg caa ctg aaa gaa caa gaa gtt ctc aaa 481
66 Gln Glu Glu Gln Ala Trp Val Gln Leu Lys Glu Gln Glu Val Leu Lys 155
67 145 150 155

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69 ctg cag gag gag gcc aaa aac ttc atc act cgg gag aac ctg gag gca      529
70 Leu Gln Glu Glu Ala Lys Asn Phe Ile Thr Arg Glu Asn Leu Glu Ala
71 160      165      170      175
73 cgg ata gaa gag gcc ttg gac tct ccg aag agt tat aac tgg gcg gtc      577
74 Arg Ile Glu Glu Ala Leu Asp Ser Pro Lys Ser Tyr Asn Trp Ala Val
75      180      185      190
77 acc aaa gaa ggg cag gtg gtc agg aac tga/gaacagaggg ctctcaggcc      627
78 Thr Lys Glu Gly Gln Val Val Arg Asn
79      195      200
81 caaataagga cagtgccttg ctagggactg gatattgggg tagaaattgg tgcattcccag      687
83 gaggggtggca cagccttgtc cagagcagcc cccattcatt ctagatttgg caccaggtat      747
85 agtacctgtt ctgacaccac atacaaactc cggacagcat taaactctgg gaagttccta      807
87 tcacacagaa gatcagactg gactgtcccc tctagaagcc aagagctgtc tcttgagttt      867
89 cttggaatag tgtgagccca atgtttcctg cttttataaa taaactattg gaaagca      924
92 <210> SEQ ID NO: 2
93 <211> LENGTH: 200
94 <212> TYPE: PRT
95 <213> ORGANISM: Rattus sp.
97 <400> SEQUENCE: 2
99 Met Leu Arg Ala Leu Asn Arg Leu Ala Ala Arg Pro Gly Gly Gln Pro
100 1      5      10      15
103 Pro Thr Leu Leu Leu Pro Val Arg Gly Arg Lys Thr Arg His Asp
104      20      25      30
107 Pro Pro Ala Lys Ser Lys Val Gly Arg Val Lys Met Pro Pro Ala Val
108      35      40      45
111 Asp Pro Ala Glu Leu Phe Val Leu Thr Glu Arg Tyr Arg Gln Tyr Arg
112      50      55      60
115 Glu Thr Val Arg Ala Leu Arg Arg Glu Phe Thr Leu Glu Val Arg Gly
116 65      70      75      80
119 Lys Leu His Glu Ala Arg Ala Gly Val Leu Ala Glu Arg Lys Ala Gln
120      85      90      95
123 Glu Ala Ile Arg Glu His Gln Glu Leu Met Ala Trp Asn Arg Glu Glu
124      100      105      110
127 Asn Arg Arg Leu Gln Glu Leu Arg Ile Ala Arg Leu Gln Leu Glu Ala
128      115      120      125
131 Gln Ala Gln Glu Leu Arg Gln Ala Glu Val Gln Ala Gln Arg Ala Gln
132      130      135      140
135 Glu Glu Gln Ala Trp Val Gln Leu Lys Glu Gln Glu Val Leu Lys Leu
136 145      150      155      160
139 Gln Glu Glu Ala Lys Asn Phe Ile Thr Arg Glu Asn Leu Glu Ala Arg
140      165      170      175
143 Ile Glu Glu Ala Leu Asp Ser Pro Lys Ser Tyr Asn Trp Ala Val Thr
144      180      185      190
147 Lys Glu Gly Gln Val Val Arg Asn
148      195      200
151 <210> SEQ ID NO: 3
152 <211> LENGTH: 998
153 <212> TYPE: DNA
154 <213> ORGANISM: Rattus sp.

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156 <220> FEATURE:
157 <221> NAME/KEY: CDS
158 <222> LOCATION: (1)..(996)
160 <400> SEQUENCE: 3
161 atg cta cgc gcg ctg agc cgc ctg ggc gcg ggg acc ccg tgc agg ccc 48
162 Met Leu Arg Ala Leu Ser Arg Leu Gly Ala Gly Thr Pro Cys Arg Pro
163 1 5 10 15
165 cgg gcc cct ctg gtg ctg cca gcg cgc ggc cgc aag acc cgc cac gac 96
166 Arg Ala Pro Leu Val Leu Pro Ala Arg Gly Arg Lys Thr Arg His Asp
167 20 25 30
169 ccg ctg gcc aaa tcc aag atc gag cga gtg aac atg ccg ccc gcg gtg 144
170 Pro Leu Ala Lys Ser Lys Ile Glu Arg Val Asn Met Pro Pro Ala Val
171 35 40 45
173 gac cct gcg gag ttc ttc gtg ctg atg gag cgt tac cag cac tac cgc 192
174 Asp Pro Ala Glu Phe Phe Val Leu Met Glu Arg Tyr Gln His Tyr Arg
175 50 55 60
177 cag acc gtg cgc gcc ctc agg atg gag ttc gtg tcc gag gtg cag agg 240
178 Gln Thr Val Arg Ala Leu Arg Met Glu Phe Val Ser Glu Val Gln Arg
179 65 70 75 80
181 aag gtg cac gag gcc cga gcc ggg gtt ctg gcg gag cgc aag gcc ctg 288
182 Lys Val His Glu Ala Arg Ala Gly Val Leu Ala Glu Arg Lys Ala Leu
183 85 90 95
185 aag gac gcc gcc gag cac cgc gag ctg atg gcc tgg aac cag gcg gag 336
186 Lys Asp Ala Ala Glu His Arg Glu Leu Met Ala Trp Asn Gln Ala Glu
187 100 105 110
189 aac cgg cgg ctg cac gag ctg cgg ata gcg agg ctg cgg cag gag gag 384
190 Asn Arg Arg Leu His Glu Leu Arg Ile Ala Arg Leu Arg Gln Glu Glu
191 115 120 125
193 cgg gag cag gag cag cgg cag gcg ttg gag cag gcc cgc aag gcc gaa 432
194 Arg Glu Gln Glu Gln Arg Gln Ala Leu Glu Gln Ala Arg Lys Ala Glu
195 130 135 140
197 gag gtg cag gcc tgg gcg cag cgc aag gag cgg gaa gtg ctg cag ctg 480
198 Glu Val Gln Ala Trp Ala Gln Arg Lys Glu Arg Glu Val Leu Gln Leu
199 145 150 155 160
201 cag gaa gag gtg aaa aac ttc atc acc cga gag aac ctg gag gca cgg 528
202 Gln Glu Glu Val Lys Asn Phe Ile Thr Arg Glu Asn Leu Glu Ala Arg
203 165 170 175
205 gtg gaa gca gca ttg gac tcc cgg aag aac tac aac tgg gcc atc acc 576
206 Val Glu Ala Ala Leu Asp Ser Arg Lys Asn Tyr Asn Trp Ala Ile Thr
207 180 185 190
209 aga gag ggg ctg gtg gtc agg cca caa cgc agg gac tcc tag ggg ccc 624
210 Arg Glu Gly Leu Val Val Arg Pro Gln Arg Arg Asp Ser Gly Pro
211 195 200 205
213 agt aag gac agt gcc cgc cag gga cca tgt atg tat cat ggc gga aga 672
214 Ser Lys Asp Ser Ala Arg Gln Gly Pro Cys Met Tyr His Gly Gly Arg
215 210 215 220
217 gtt gcc cct gac ctg gaa taa agc agt tgg tgt tgc tta tga gga agg 720
218 Val Gly Pro Asp Leu Glu Ser Ser Trp Cys Cys Leu Gly Arg
219 225 230 235

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221 ttc agc ctt atc cag cac agc ctt cac gtt ttg ccc tct gct gtc acc      768
222 Phe Ser Leu Ile Gln His Ser Leu His Val Leu Pro Ser Ala Val Thr
223      240      245      250
225 act tgg tca gaa act tcc aaa cgc agt gcc ctg ttc tgc cgg tgt gta      816
226 Thr Trp Ser Glu Thr Ser Lys Arg Ser Ala Leu Phe Cys Arg Cys Val
227      255      260      265
229 aag cct cag cgc acc agg aga ccc tag agt ggt ttc cat ctc aca gag      864
230 Lys Pro Gln Arg Thr Arg Arg Pro      Ser Gly Phe His Leu Thr Glu
231 270      275      280
233 aat cag aca ggc cac agc ccc ctc agg cag cca ggt cat ctg agt atc      912
234 Asn Gln Thr Gly His Ser Pro Leu Arg Gln Pro Gly His Leu Ser Ile
235 285      290      295      300
237 att aag agt agt gat ggg aag att aca gtc tga ggg cca aac gtg cct      960
238 Ile Lys Ser Ser Asp Gly Lys Ile Thr Val      Gly Pro Asn Val Pro
239      305      310      315
241 gct tcc tgt ttt tgt aaa taa agt ttt gtt gga aca/ca      998
242 Ala Ser Cys Phe Cys Lys      Ser Phe Val Gly Thr
243      320      325
246 <210> SEQ ID NO: 4
247 <211> LENGTH: 205
248 <212> TYPE: PRT
249 <213> ORGANISM: Rattus sp.
251 <400> SEQUENCE: 4
253 Met Leu Arg Ala Leu Ser Arg Leu Gly Ala Gly Thr Pro Cys Arg Pro
254 1      5      10      15
257 Arg Ala Pro Leu Val Leu Pro Ala Arg Gly Arg Lys Thr Arg His Asp
258      20      25      30
261 Pro Leu Ala Lys Ser Lys Ile Glu Arg Val Asn Met Pro Pro Ala Val
262      35      40      45
265 Asp Pro Ala Glu Phe Phe Val Leu Met Glu Arg Tyr Gln His Tyr Arg
266      50      55      60
269 Gln Thr Val Arg Ala Leu Arg Met Glu Phe Val Ser Glu Val Gln Arg
270 65      70      75      80
273 Lys Val His Glu Ala Arg Ala Gly Val Leu Ala Glu Arg Lys Ala Leu
274      85      90      95
277 Lys Asp Ala Ala Glu His Arg Glu Leu Met Ala Trp Asn Gln Ala Glu
278      100      105      110
281 Asn Arg Arg Leu His Glu Leu Arg Ile Ala Arg Leu Arg Gln Glu Glu
282      115      120      125
285 Arg Glu Gln Glu Gln Arg Gln Ala Leu Glu Gln Ala Arg Lys Ala Glu
286      130      135      140
289 Glu Val Gln Ala Trp Ala Gln Arg Lys Glu Arg Glu Val Leu Gln Leu
290 145      150      155      160
293 Gln Glu Glu Val Lys Asn Phe Ile Thr Arg Glu Asn Leu Glu Ala Arg
294      165      170      175
297 Val Glu Ala Ala Leu Asp Ser Arg Lys Asn Tyr Asn Trp Ala Ile Thr
298      180      185      190
301 Arg Glu Gly Leu Val Val Arg Pro Gln Arg Arg Asp Ser
302      195      200      205

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305 <210> SEQ ID NO: 5
306 <211> LENGTH: 24
307 <212> TYPE: PRT
308 <213> ORGANISM: Rattus sp.
310 <400> SEQUENCE: 5
312 Gly Pro Ser Lys Asp Ser Ala Arg Gln Gly Pro Cys Met Tyr His Gly
313 1 5 10 15
316 Gly Arg Val Gly Pro Asp Leu Glu
317 20
320 <210> SEQ ID NO: 6
321 <211> LENGTH: 6
322 <212> TYPE: PRT
323 <213> ORGANISM: Rattus sp.
325 <400> SEQUENCE: 6
327 Ser Ser Trp Cys Cys Leu
328 1 5
331 <210> SEQ ID NO: 7
332 <211> LENGTH: 42
333 <212> TYPE: PRT
334 <213> ORGANISM: Rattus sp.
336 <400> SEQUENCE: 7
338 Gly Arg Phe Ser Leu Ile Gln His Ser Leu His Val Leu Pro Ser Ala
339 1 5 10 15
342 Val Thr Thr Trp Ser Glu Thr Ser Lys Arg Ser Ala Leu Phe Cys Arg
343 20 25 30
346 Cys Val Lys Pro Gln Arg Thr Arg Arg Pro
347 35 40
350 <210> SEQ ID NO: 8
351 <211> LENGTH: 33
352 <212> TYPE: PRT
353 <213> ORGANISM: Rattus sp.
355 <400> SEQUENCE: 8
357 Ser Gly Phe His Leu Thr Glu Asn Gln Thr Gly His Ser Pro Leu Arg
358 1 5 10 15
361 Gln Pro Gly His Leu Ser Ile Ile Lys Ser Ser Asp Gly Lys Ile Thr
362 20 25 30
365 Val
369 <210> SEQ ID NO: 9
370 <211> LENGTH: 11
371 <212> TYPE: PRT
372 <213> ORGANISM: Rattus sp.
374 <400> SEQUENCE: 9
376 Gly Pro Asn Val Pro Ala Ser Cys Phe Cys Lys
377 1 5 10
380 <210> SEQ ID NO: 10
381 <211> LENGTH: 5
382 <212> TYPE: PRT
383 <213> ORGANISM: Rattus sp.
385 <400> SEQUENCE: 10

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/484,629A

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